

# Renyu (Philip) Zhang

Updated in September 2021

## CONTACT INFORMATION

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**Website:** <https://rphilipzhang.github.io/rphilipzhang/>

### Address:

New York University Shanghai  
1555 Century Avenue, Pudong  
Shanghai, China, 200122

Department of Decision Sciences and Managerial Economics  
Chinese University of Hong Kong  
Cheng Yu Tung Building  
12 Chak Cheung Street  
Shatin, N.T., Hong Kong, China

## EDUCATION

**Washington University in St. Louis, Olin Business School** St. Louis, MO

Ph.D. Operations Management 05/2016

- Thesis: **Dynamic Pricing and Inventory Management: Theory and Applications**
- Advisors: Nan Yang, Fuqiang Zhang

**Peking University, School of Mathematical Sciences** Beijing, China

B.S. Mathematics 07/2011

## ACADEMIC POSITION

**Chinese University of Hong Kong, CUHK Business School** Hong Kong, China

Visiting Associate Professor 09/2021-08/2022

**New York University Shanghai** Shanghai, China

Assistant Professor of Operations Management 09/2016-

NYU Global Network Assistant Professor 07/2017-

**New York University, Stern School of Business** New York, NY

Visiting Assistant Professor of Operations Management 06/2017-

## NON-ACADEMIC POSITION

**Kwai** Beijing, China

Economist & Tech Lead 12/2018-

## RESEARCH INTERESTS

### Methodologies

Reinforcement learning; optimization; randomized experiment; matching; game theory; mechanism design; econometrics and causal inference.

### Applications

Online platforms and marketplaces; sharing economy; social networks; recommender systems; advertising; revenue management and pricing; inventory and supply chain management.

## PUBLICATIONS

1. **Dynamic Pricing and Inventory Management under Inventory-Dependent Demand**, *Operations Research*, **62**(5), 2014, 1077-1094 (with Nan Yang).
2. **Dynamic Pricing and Inventory Management under Fluctuating Procurement Costs**, *Manufacturing & Service Operations Management*, **17**(3), 2015, 321-334 (with Guang Xiao and Nan Yang).

3. **Dynamic Supply Risk Management with Signal-Based Forecast Multi-Sourcing, and Discretionary Selling**, *Production and Operations Management*, **26**(7), 2017, 1399-1415 (with Long Gao, Nan Yang, and Ting Luo).
  4. **Trade-in Remanufacturing, Customer Purchasing Behavior, and Government Policy**, *Manufacturing & Service Operations Management*, **20**(4), 2018, 601-616 (with Fuqiang Zhang).
    - Finalist award in the *POMS College of Supply Chain Management 2015 Best Student Paper Competition*
  5. **Comparative Statics Analysis of An Inventory Management Model with Dynamic Pricing, Market Environment Fluctuation, and Delayed Differentiation**, *Production and Operations Management*, forthcoming, 2021 (with Nan Yang).
- PAPERS UNDER REVIEW
6. **Competition and Coopetition for Two-sided Platforms** (with Maxime Cohen).
    - Honorable Mention in the *INFORMS Service Science Section 2017 Best Cluster Paper Award*
  7. **Data Aggregation and Demand Prediction** (with Maxime Cohen and Kevin Jiao).
    - Finalist in the *INFORMS Data Mining Section 2019 Best Paper Award*
  8. **Cold Start to Improve Market Thickness on Online Advertising Platforms: Data-Driven Algorithms and Field Experiments** (with Zikun Ye, Dennis Zhang, Heng Zhang, Xin Chen, and Zhiwei Xu).
    - Finalist in the *INFORMS Revenue Management and Pricing 2020 Student Paper Competition*
  9. **The Impact of Social Nudges on User-Generated Content for Social Network Platforms** (with Zhiyu Zeng, Hengchen Dai, Dennis Zhang, Heng Zhang, Max Shen, and Zhiwei Xu).
  10. **Online Advertisement Allocation in the Presence of Customer Choices** (with Xiaolong Li, Ying Rong, and Huan Zheng).
  11. **Dynamic Pricing and Inventory Management in the Presence of Online Reviews** (with Nan Yang).
  12. **Carpool Services for Ride-sharing Platforms: Price and Welfare Implications** (with Xuan Wang).
  13. **Content Promotion for Online Content Platforms with Network Diffusion Effect** (with Yunduan Lin, Mengxin Wang, Max Shen, and Heng Zhang).
  14. **Dynamic Competition under Market Size Dynamics: Balancing the Exploitation-Induction Tradeoff** (with Nan Yang).
  15. **Inventory Commitment and Monetary Compensation under Competition** (with Junfei Lei, Fuqiang Zhang, and Yugang Yu).
- WORKS IN PROGRESS
16. **Recommender Systems on Platforms** (with Xuan Wang and Dennis J. Zhang).
- BOOKS
17. *Demand Prediction in Retail - A Practical Guide to Leverage Data and Predictive Analytics*, Springer Series in Supply Chain Management, forthcoming, 2021 (with Maxime C. Cohen, Paul-Emile Gras, and Arthur Pentecoste).
- SEMINARS AND CONFERENCE TALKS
- 2021 HKUST Business School, MSOM, Tsinghua University IE, CSAMSE, INFORMS
  - 2020 CUHK Business School, DataFun Talk, Tsinghua University SEM, CUHK Shenzhen School of Data Science, HKU Business School, INFORMS, Sun Yat-sen University Lingnan College, Fudan University School of Management, NSFC PI Meeting, Sichuan University School of Business, NUS IORA [[Video link](#)], SJTU Antai, NYU Stern, Club Bear Online Seminar [[Video link](#)]

- 2019 INFORMS, UIC College of Business Administration, Data-Driven and Innovative Operations Workshop, POMS HK, Young Scholars' Forum on Management Science
- 2018 PKU Guanghua, Sun Yat-sen University Lingnan College, JHU Carey, NYU Stern, Operations Management under "Internet+" Environment Workshop, MSOM, RMP, Revenue Management Workshop, POMS, POMS HK, CUHK Business School
- 2017 Young Scholars' Forum on Management Science, Sichuan University School of Business, WUSTL Olin, INFORMS, HK PolyU Faculty of Business, CityU HK College of Business, HKUST Business School, NYU Stern, MSOM, SMU Lee Kong Chian School of Business, NUS Business School, USTC School of Management, POMS HK
- 2016 Southeast University School of Economics and Management, Tsinghua University SEM, SJTU Antai, U of Toronto Rotman, INFORMS, NJU School of Management and Engineering, Southwest University of Finance and Economics School of Business Administration, Southwest Jiaotong University School of Economics and Management, SUFE School of Business Administration, CSAMSE, RMP, POMS, NYU Shanghai, UTD Jindal, NYU Stern, CUHK SEEM, HKUST Business School, HKUST IELM, HK PolyU Faculty of Business, CityU HK College of Business
- 2015 DSI, INFORMS, MSOM, POMS
- 2014 INFORMS, MSOM
- 2013 INFORMS
- 2012 INFORMS

- HONORS, AWARDS, AND GRANTS
1. Finalist, *INFORMS Revenue Management and Pricing Student Paper Competition*. 10/2020
  2. Finalist, *INFORMS Data Mining Section Best Paper Award*. 10/2019
  3. MSOM Meritorious Service Award 2018, 2019 04/2020
  4. Shanghai Eastern Scholar, Young Scientist Program QD2018053, PI, RMB 200,000/Year.01/2019-12/2021
  5. National Natural Science Foundation of China, Young Scientist Program 71802133, PI, RMB 180,000. 01/2019-12/2021
  6. Honorable Mention, *INFORMS Service Science Best Cluster Paper Award*. 10/2017
  7. Shanghai Pujiang Talent Program 17PJC074, PI, RMB 100,000. 09/2017-08/2019
  8. Finalist Award, *POMS College of Supply Chain Management Best Student Paper Competition*. 05/2015
  9. First Prize Award, Chinese Mathematics Olympiad 10/2006

TEACHING  
EXPERIENCES

**New York University Shanghai**

**Instructor**

- Machine Learning for Business (MS in Data Analytics and Business Computing)
  - Summer 2021 (4.3/5), Summer 2020 (4.8/5)
- Business Analytics (Undergraduate)
  - Spring 2021 (4.9/5, 4.9/5), Spring 2019 (4.2/5, 4.8/5), Spring 2018 (4.4/5, 4.7/5)
- Operations Management (Undergraduate)
  - Spring 2020 (4.6/5), Fall 2017 (3.8/5), Spring 2017 (4.0/5), Fall 2016 (4.6/5)

**Business Honors Thesis Advisor**

- Ziheng Wang (2021), Yiyi Zhang (2018), Yujia Ni (2018).

## Kwai

### Internal Instructor

- Data Driven Optimization 05/2020
- Operations Analytics 01-05/2019

## Washington University in St. Louis, Olin Business School

### Teaching Assistant

- Operations Management; Advanced Operations Strategy; Market Competition and Value Appropriation ; Operations Planning and Control.

## PROFESSIONAL SERVICES

### Journal Referee

*Management Science, Operations Research, Manufacturing & Service Operations Management, Marketing Science, Production and Operations Management, Transportation Science, Transportation Research: Part B, Service Science, Naval Research Logistics, Decision Sciences, European Journal of Operations Research, Omega, Journal of Management Science and Engineering, Applied Mathematical Modeling, Operational Research: An International Journal.*

### Competition Judge

MSOM Student Paper Competition (2021, 2020, 2019, 2018, 2017).  
POM College of Supply Chain Management Student Paper Competition (2020).  
CSAMSE Best Paper Competition (2021).

### Conference Committee and Session Chair

Session Chair:

- INFORMS 2020, INFORMS 2018, POMS 2018, POMS-HK Conference 2018, POMS-HK Conference 2017, CSAMSE Conference 2016.

Sponsorships and Exhibits Committee member:

- POMS Annual Meeting 2016.

### Professional Organization Membership

INFORMS, MSOM, RMP, APS, POMS.

### Internal Services

NYU Shanghai Candidate Weekend instructor. 03/2018  
NYU Shanghai Business Honors program thesis advisor. 09/2017-  
NYU Shanghai Operations Management Reading Group co-organizer. 03/2017-  
NYU Shanghai Housing Subcommittee member. 11/2016-05/2019  
NYU Shanghai Business Research Seminar coordinator. 09/2016-08/2017  
NYU Shanghai Business Honors Program guest lecturer. 10/2016-  
Olin Business School Operations Management PhD Seminar coordinator. 01/2013-12/2013

## CONSULTING EXPERIENCES

### Cardinal Operations

Parttime Scientist 09/2017-08/2018

### Boeing Center for Supply Chain Innovation, Washington University in St. Louis

Parttime consultant. 10/2013-06/2015

## PERSONAL

Chinese citizen, Christian, married with one child.